

1. (Twice Amended) A method of adjusting a volume of a fluid supplied to a patient, the method comprising the steps of:

(a) supplying a plurality of volumes of fluid to a patient during a like plurality of inspiratory phases of a respiratory cycle of such a patient, each volume of fluid being supplied at an inspiratory positive airway pressure during a corresponding inspiratory phase;

(b) determining, for each inspiratory phase, a tidal volume of fluid received by such a patient;

(c) determining an average tidal volume of fluid received by such a patient from the volumes of fluid received by such a patient during the plurality of inspiratory phases, wherein the average tidal volume is determined irrespective of a period of time during which the plurality of inspiratory phases occur;

(d) comparing the average tidal volume to a predetermined target tidal volume;

and

(e) adjusting the inspiratory positive airway pressure based on the comparison.

7. (Twice Amended) A method of supplying fluid to a patient, comprising:

(a) supplying a first volume of fluid to a patient at a first inspiratory positive airway pressure;

(b) determining, for the first volume of fluid supplied to such a patient, a first tidal volume of fluid received by such a patient;

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(c) supplying a second volume of fluid to such a patient at the first inspiratory positive airway pressure;

(d) determining, for the second tidal volume of fluid supplied to such a patient, a second volume of fluid received by such patient;

(e) determining, based on the first and the second tidal volumes of fluid received by such a patient, a first average tidal volume of fluid received by such patient, wherein the first average tidal volume is determined irrespective of a period of time during which the plurality of inspiratory phases occur;

(f) comparing the first average tidal volume to a predetermined target tidal volume; and

(g) adjusting the first inspiratory positive airway pressure to a second inspiratory positive airway pressure based on the comparison in comparing step (f).

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8. (Twice Amended) The method as set forth in claim 7, further comprising:

(h) supplying a third volume of fluid to such a patient at the second inspiratory positive airway pressure;

(i) determining, for the third tidal volume of fluid supplied to such a patient, a third volume of fluid received by such a patient;

(j) determining, based on the second and the third tidal volumes of fluid received by such a patient, a second average tidal volume of fluid received by such a patient, wherein the

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second average tidal volume is determined irrespective of a period of time during which the plurality of inspiratory phases occur;

(k) comparing the second average tidal volume to the predetermined target tidal volume; and

(l) adjusting the second inspiratory positive airway pressure to a third inspiratory positive airway pressure based on the comparison in comparing step (k).

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13. (Twice Amended) An apparatus for supplying fluid to a patient, the apparatus comprising:

a pressure generating system adapted to provide a flow of fluid at one of a variable pressure and a variable flow;

a patient circuit operatively coupled to the pressure generating system to deliver the flow of fluid to a patient;

an interface device operatively coupled to the patient circuit to communicate the flow of fluid to an airway of a patient;

at least one sensor operatively coupled to one of the pressure generating system, the patient circuit, and the interface device to detect a parameter indicative of a volume of fluid delivered to such a patient; and

a controller operatively coupled to the sensor and the pressure generating system, wherein the controller:

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(a) determines, for each inspiratory phase of a respiratory cycle of such a patient, a tidal volume of fluid received by such a patient based on the parameter indicative of a volume of fluid delivered to such a patient provided by the sensor;

(b) determines an average tidal volume of fluid received by such a patient over a plurality of inspiratory phases, wherein the average tidal volume is determined irrespective of a period of time during which the plurality of inspiratory phases occur;

(c) compares the average tidal volume of fluid received by such a patient to a predetermined target tidal volume; and

(d) causes the pressure generating system to adjust one a pressure and a rate of flow of fluid output thereby based on the comparison.

19. (Twice Amended) An apparatus for supplying fluid to a patient, the apparatus comprising:

pressure generating means for providing a flow of fluid at one of a variable pressure and a variable flow rate;

delivering means for delivering the flow of fluid to a patient;

interfacing means for communicating the flow of fluid to an airway of a patient;

sensing means for sensing a parameter indicative of a volume of fluid delivered to such a patient; and

processing means for:

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- (a) determining, for each inspiratory phase of a respiratory cycle of such a patient, a tidal volume of fluid received by such a patient based on the parameter indicative of a volume of fluid delivered to such a patient provided by the sensing means;
 - (b) determining an average tidal volume of fluid received by such a patient over a plurality of inspiratory phases, wherein the average tidal volume is determined irrespective of a period of time during which the plurality of inspiratory phases occur;
 - (c) comparing the average tidal volume of fluid received by such a patient to a predetermined target tidal volume; and
 - (d) causing the pressure generating means to adjust at least one of a pressure and a rate of flow of fluid output thereby based on the comparison.
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23. (Twice Amended) An apparatus for adjusting a volume of a fluid supplied to a patient, the apparatus comprising:

- supplying means for supplying a plurality of volumes of fluid to a patient during a like plurality of inhalations by such a patient, with each volume of fluid supplied at an inspiratory positive airway pressure during a corresponding inspiratory phase;
- tidal volume determining means for determining, for each inspiratory phase, a tidal volume of fluid received by such a patient;
- average tidal volume determining means for determining an average tidal volume of fluid received by such a patient from the tidal volumes of fluid received by such a patient

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during the plurality of inspiratory phases, wherein the average tidal volume is determined
irrespective of a period of time during which the plurality of inspiratory phases occur;

comparing means for comparing the average tidal volume to a predetermined
target tidal volume; and

adjusting means for adjusting the inspiratory positive airway pressure based on the
comparison.

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27. (Twice Amended) An apparatus for supplying a desired volume of a fluid to
a patient, the apparatus comprising:

supplying means for supplying a first volume of fluid to a patient at a first
inspiratory positive airway pressure;

determining means for determining, for the first volume of fluid supplied to such a
patient, a first tidal volume of fluid received by such a patient, wherein the supplying means
supplies a second volume of fluid to such a patient at the first inspiratory positive airway
pressure, and wherein the determining means determines, for the second volume of fluid supplied
to such a patient, a second tidal volume of fluid received by such a patient;

averaging means for determining, based on the first and the second tidal volumes
of fluid received by such a patient, a first average tidal volume of fluid received by such a
patient, wherein the first average tidal volume is determined irrespective of a period of time
during which the plurality of inspiratory phases occur;

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comparing means for comparing the first average tidal volume to a predetermined target tidal volume; and

adjusting means for adjusting the first inspiratory positive airway pressure to a second inspiratory positive airway pressure based on the comparison of the first average volume to the predetermined target volume.

28. (Twice Amended) The apparatus as set forth in claim 27, wherein:

the supplying means supplies a third volume of fluid to such a patient at the second inspiratory positive airway pressure;

the determining means determines, for the third tidal volume of fluid supplied to such a patient, a third volume of fluid received by such a patient;

the averaging means determines, based on the second and the third tidal volumes of fluid received by such a patient, a second average tidal volume of fluid received by such a patient, wherein the second average tidal volume is determined irrespective of a period of time during which the plurality of inspiratory phases occur;

the comparing means compares the second average tidal volume to the predetermined target tidal volume; and

the adjusting means adjusts the second inspiratory positive airway pressure to a third inspiratory positive airway pressure based on the comparison of the second average tidal volume to the predetermined target tidal volume.